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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,152	10/20/2003	Yao Ching Su	E0523-00020	6400

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EXAMINER

PERRY, ANTHONY T

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 11/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/689,152

Applicant(s)

SU ET AL.

Examiner

Anthony T. Perry

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) 2-5, 11, 19-23, 27-33, 39, 47-51, 55-59 and 61-64 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6-10, 12-18, 24-26, 34-38, 40-46, 52-54 and 60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/19/05.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of species VII in the reply filed on 8/10/06 is acknowledged.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6-10, 12-18, 24-26, 34-38, 40-46, 52-54, and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US 7,015,645).

Regarding claims 1, 35, and 37, Kim et al. teach a method of making a sub-pixel barrier structure for a plasma display panel, the barrier structure having an array of intersecting barrier rib row and column members, the method comprising the steps of: selecting a line width for each of the barrier rib row, column members, and the supplementary barrier members which minimizes fired shrinkage distortions in the barrier structure including the periphery of the barrier structure; patterning the barrier rib row and column members of the selected line widths; patterning supplementary barrier rib members in the layer adjacent at least one edge of the barrier structure; and firing the substrate (for example, see col. 5, lines 17-25 and Figs. 1-5).

Kim et al. do not specifically recite forming a layer of dielectric material over a substrate and then patterning the barrier structure in the layer. However, it is well known in the art to deposit a dielectric material on the substrate and then pattern the barrier structure in the layer.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to reasonably contemplate forming the barrier structure pattern by first forming a dielectric layer on the substrate and then patterning the barrier structure in the layer since such a method is conventional in the art.

Regarding claim 6, Kim et al. do not specifically state that the sup-pixels spaces (cells) have a hexagonal shape. However, it is well known in the art that the discharge cells can have various shapes (rectangular, circular, hexagonal, etc.). It has been held that a change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). It would have been obvious to one having ordinary skill in the art to provide the discharge cells with a hexagonal shape, since such a modification would have involve a mere change in the shape of a component, and since such a structure is well known in the art.

Regarding claims 7-9 and 36, Kim et al. teach the patterning step includes patterning supplementary barrier rib members adjacent at least one edge of the barrier structure, wherein the supplementary barrier rib members close open sub-pixel spaces disposed along the at least one edge of the barrier structure, and the selecting step includes selecting a line width for each of the supplementary barrier rib members, which minimizes fired shrinkage distortions at a periphery of the barrier structure (for example, see Fig. 8 and col. 5, lines 17-25).

Regarding claims 10, 12-16, 25, 38, and 40-44, the supplementary barrier rib members include an elongated barrier rib column member (44a) and an elongated barrier rib row member (44b), wherein the row member (44b) is shorter than the column member (44a) (see Fig. 8).

Regarding claims 17-18, 24-26, 34, 45-46, 52-54, and 60, the supplementary barrier rib members include two elongated barrier rib column members (44a located on the left and right

sides of the PDP in the non-display area (42)) and two elongated barrier rib row members (44a located on the top and the bottom of the PDP in the non-display area (42)), the at least two supplementary barrier rib column members being attached at ends thereof by the elongated barrier rib row member and the at least two supplementary barrier rib row members being attached at ends thereof by the elongated barrier rib column member forming a rectangle with the edges of the barrier structure having a straight profile and the two supplementary barrier rib column members are shorter in length than the two supplementary barrier rib row members (for example, see Figs. 2 and 3).

Other Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Both of the references cited by the Applicant, Whang et al. (US 6,373,195) and Sano (US 5,317,334) provide evidence that hexagonal discharge cells are well known in the art.

Lee (US 2002/0086246 A1) and Shiizaki et al. (US 2002/0190930 A1) are evidence that the method of depositing a dielectric layer on a substrate and then patterning the barrier structure in the layer is conventional in the art.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is (571) 272-2459. The examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. **The fax phone number for this Group is (571) 273-8300.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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Art Unit 2879
October 30, 2006



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